N8215V4 5/01

®ADEMCO

4208U
Universal Eight Zone Remote Point Module

INSTALLATION AND SETUP GUIDE

FEATURES

The ADEMCO 4208U Remote Point Module (RPM) is an 8-zone expander that allows use of available expansion zones provided by ADEMCO controls that support polling loop devices. Characteristics of this device include:

- Can be optionally powered from an external DC power supply to reduce the amount of current draw from the polling loop.
- Uniquely identifies 8 EOLR supervised zones (all zones use 10k resistors, supplied).
- DIP Switches can be used to set zone numbers or serial numbers.
- When used in the serial number mode, each serial number in the selected group can be assigned to any zone number.
- Loops A & B can be programmed for fast (10msec) response.
- Tamper protected.

MOUNTING

!	1. **Power should be disconnected before proceeding.** 2. **Be sure to mount the 4208U before making any wire connections**

UL	**For all fire (NFPA) and UL Commercial Burglary installations, the 4208U must be tamper protected or mounted in a tamper-protected cabinet.**

When mounted remotely, tamper protection is required. Holes on the back of the module's housing permit it to be mounted horizontally or vertically. Wires can exit from the side or the breakout on the back of the housing. To enable tamper protection, set DIP Switch 8 to OFF and attach the tamper magnet (provided) (Figure 1) to the module inside cover. Be sure to enable the expansion zone tamper option at the control (program field *24 = 0). If the module's cover is removed, the magnet attached to the cover (positioned near the reed switch) will cause a tamper signal to be sent to the control for every active zone on the 4208U module. When the installation is complete, install the cover and affix the Serial Number and Zone Assignment Tables to the inside cover of the control.

When mounted inside the cabinet with the control, the 4208U should be mounted horizontally and does not need tamper protection, provided the cabinet is supervised. Insert two screws into the raised metal tabs leaving the heads app. 1/8" exposed, then hang the 4208U using the two slots on the back.

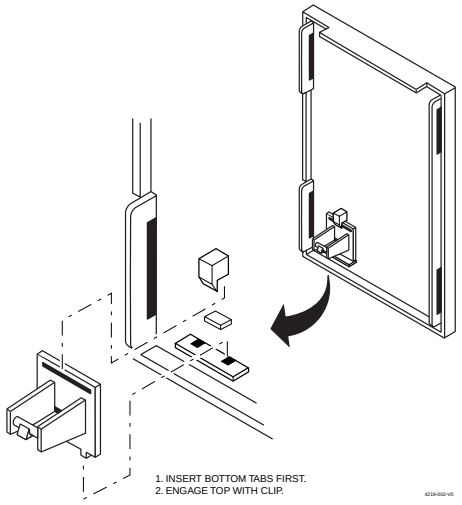

Figure 1. Tamper Magnet Installation

WIRING

CE	**For CE installations ADEMCO N6361 EMI suppression bead is required. Refer to the N6361 installation guide for wire routing instructions.**

Polling loop and protection loop wires can be brought in either through the back or front of the unit by removing the knockouts. Use 22 gauge twisted pair wire for polling loop connections. All protection loops use 10k EOL resistors (included). A maximum resistance of 300 ohms is allowed on protection loops (excluding EOLR). See Figure 2 for all connections. Keep in mind that connections to the polling loop are always required, while power supply connections are optional.

DIP SWITCH SETTINGS

Zone Assignment Mode:

In the zone assignment mode, the DIP Switches on the 4208 are used to assign the unit to a group of 8 consecutive zones. These zone numbers, once designated for the 4208U, cannot be used for anything else, even if you don't use all 8. Follow the steps below using Table 1 for DIP Switch settings.

Serial Number Mode:

In the serial number mode, the DIP Switches on the 4208U are used to assign the unit to a group of 8 serial numbers. You can assign any serial number to any zone number (except hardwire zone numbers of the control) and you do not lose zone numbers if you don't use all eight loops on the 4208U. Follow steps below using Table 2 for DIP Switch settings.

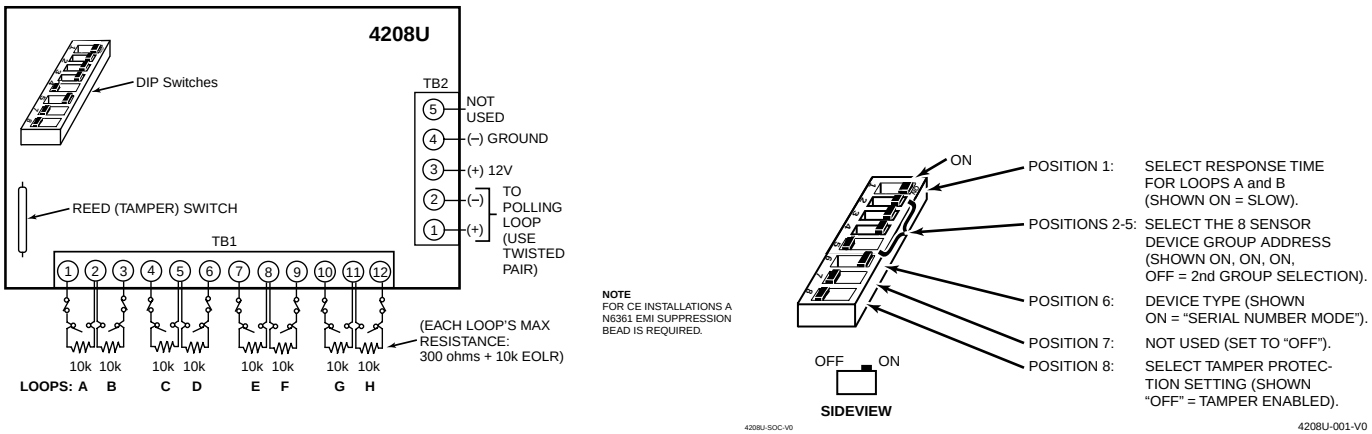
4208U
DIP Switches
REED (TAMPER) SWITCH
TB1
TB2
5 NOT USED
4 (–) GROUND
3 (+) 12V
2 (–)
1 (+)
TO POLLING LOOP (USE TWISTED PAIR)
(EACH LOOP'S MAX RESISTANCE: 300 ohms + 10k EOLR)
10k 10k 10k 10k 10k 10k 10k 10k
LOOPS: A B C D E F G H
NOTE
FOR CE INSTALLATIONS A N6361 EMI SUPPRESSION BEAD IS REQUIRED.
4208U-SOC-V0
ON
POSITION 1: SELECT RESPONSE TIME FOR LOOPS A and B (SHOWN ON = SLOW).
POSITIONS 2-5: SELECT THE 8 SENSOR DEVICE GROUP ADDRESS (SHOWN ON, ON, ON, OFF = 2nd GROUP SELECTION).
POSITION 6: DEVICE TYPE (SHOWN ON = "SERIAL NUMBER MODE").
POSITION 7: NOT USED (SET TO "OFF").
POSITION 8: SELECT TAMPER PROTECTION SETTING (SHOWN "OFF" = TAMPER ENABLED).
OFF ON
SIDEVIEW
4208U-001-V0

Figure 2: Summary of Connections

For "Zone Assignment" mode, DIP Switch position 6 must be off.

When using this mode, program each zone's "Input Type" as "DIP Switch Polling Loop Device" (DP), where applicable.

THIS SWITCH SETTING PRESETS THE LOOPS TO THESE ZONE NUMBERS DIP Switch Position ("-" Means "off")					Loop Designations								
2	3	4	5	6	A	B	C	D	E	F	G	H	*
On	On	On	On	-	1	2	3	4	5	6	7	8	**
On	On	On	-	-	9	10	11	12	13	14	15	16	
On	On	-	On	-	17	18	19	20	21	22	23	24	
On	On	-	-	-	25	26	27	28	29	30	31	32	
On	-	On	On	-	33	34	35	36	37	38	39	40	
On	-	On	-	-	41	42	43	44	45	46	47	48	
On	-	-	On	-	49	50	51	52	53	54	55	56	
On	-	-	-	-	57	58	59	60	61	62	63	64	
-	On	On	On	-	65	66	67	68	69	70	71	72	
-	On	On	-	-	73	74	75	76	77	78	79	80	
-	On	-	On	-	81	82	83	84	85	86	87	88	
-	On	-	-	-	89	90	91	92	93	94	95	96	
-	-	On	On	-	97	98	99	100	101	102	103	104	
-	-	On	-	-	105	106	107	108	109	110	111	112	
-	-	-	On	-	113	114	115	116	117	118	119	120	***
-	-	-	-	-	121	122	123	124	125	126	127	N/A	

Zone Number

*Do not select 1 – 8 for VISTA controls.
**If 9 – 16 is selected for controls that have 9 hardwire zones. Loop A (Zone 9) will be inactive.
***Accommodates option "ONE 4208 IN USE" if referred to in control programming.
NOTE: Consult the Control Panel Instructions to determine the valid zone numbers for that control panel.

Table 1. 4208U Zone Assignments

THIS SWITCH SETTING PRESETS THE LOOP TO THESE SERIAL NUMBERS DIP Switch Position ("-" Means "off")					Loop Designation							
2	3	4	5	6	LOOP A	LOOP B	LOOP C	LOOP D	LOOP E	LOOP F	LOOP G	LOOP H
ON	ON	ON	ON	ON	000-4116	000-4117	000-4118	000-4119	000-4124	000-4125	000-4126	000-4127
ON	ON	ON	-	ON	006-9908	006-9909	006-9910	006-9911	006-9916	006-9917	006-9918	006-9919
ON	ON	-	ON	ON	013-9812	013-9813	013-9814	013-9815	013-9820	013-9821	013-9822	013-9823
ON	ON	-	-	ON	020-9716	020-9717	020-9718	020-9719	020-9724	020-9725	020-9726	020-9727
ON	-	ON	ON	ON	027-9620	027-9621	027-9622	027-9623	027-9628	027-9629	027-9630	027-9631
ON	-	ON	-	ON	034-9524	034-9525	034-9526	034-9527	034-9532	034-9533	034-9534	034-9535
ON	-	-	ON	ON	041-9428	041-9429	041-9430	041-9431	041-9436	041-9437	041-9438	041-9439
ON	-	-	-	ON	048-9332	048-9333	048-9334	048-9335	048-9340	048-9341	048-9342	048-9343
-	ON	ON	ON	ON	055-9236	055-9237	055-9238	055-9239	055-9244	055-9245	055-9246	055-9247
-	ON	ON	-	ON	062-9140	062-9141	062-9142	062-9143	062-9148	062-9149	062-9150	062-9151
-	ON	-	ON	ON	069-9044	069-9045	069-9046	069-9047	069-9052	069-9053	069-9054	069-9055
-	ON	-	-	ON	076-8948	076-8949	076-8950	076-8951	076-8956	076-8957	076-8958	076-8959
-	-	ON	ON	ON	083-8852	083-8853	083-8854	083-8855	083-8860	083-8861	083-8862	083-8863
-	-	ON	-	ON	090-8756	090-8757	090-8758	090-8759	090-8764	090-8765	090-8766	090-8767
-	-	-	ON	ON	097-8660	097-8661	097-8662	097-8663	097-8668	097-8669	097-8670	097-8671
-	-	-	-	ON	104-8564	104-8565	104-8566	104-8567	104-8572	104-8573	104-8574	104-8575

Table 2. 4208U Serial Number Assignments

Set the DIP switches on the 4208U as instructed below (see Figure 1):

1. Select fast/slow response for loops A and B using DIP Switch 1: Fast = OFF (10msec) Slow = ON (400msec).
2. Select mode of operation (serial number or zone assignment mode) using DIP Switch 6: Serial Number mode = ON Zone Assignment mode = OFF.
3. Select the group setting using DIP Switches 2, 3, 4, and 5. See Table 1 for zone assignments or Table 2 for serial number assignments. If using more than one 4208U, be sure to set each one to a different group setting.
4. DIP Switch 7: Not used, set to OFF.
5. Select the 4208U Tamper Protection setting using DIP Switch 8: Tamper Disabled = ON Tamper Enabled = OFF. Tamper will report for every active zone on the 4208U module.

PROGRAMMING

When setting the 4208U to a group of zone numbers, each zone must be programmed as follows:

- On 4140XMP and earlier controls, these zones must be programmed as Left Loop Polling Loop Zones.
- On VISTA-40 and later controls, these zones must be programmed in the #93 Menu Mode Zone Programming as INPUT TYPE "7" -- DIP Switch type polling device (DP).

When setting the 4208U to a group of serial numbers, each zone must be programmed as INPUT TYPE "6" --SL (Serial Number Polling Loop Device). Loops can be learned in any order and assigned to any legitimate zone number.

When prompted to learn the serial number for a particular zone, you may either enter it manually through the keypad or through V-Link, or "learn" it by momentarily faulting (shorting) the terminals of that zone as required by the control. If entering a serial number manually through the keypad, enter it and press "*" to advance to the next prompt, which will ask you for the loop number. Entering a "1" for each serial number entered.

If learning or entering a serial number, "Duplicate of Zone XX"

Duplicate of Zone XX" is displayed; another device with that same serial number is already in the system. In that case, use a different serial number group setting on the 4208U.

If learning a serial number by faulting its associated loop, make sure that other polling loop devices are not activated, as they may interfere with the device being learned.

VERIFICATION OF PROGRAMMING

To verify proper programming, the following test should be performed:

1. Be sure to enable expansion zone tamper protection at the control (program field *24 = 0).
2. Set DIP Switch 8 to OFF (tamper enabled).
3. Replace the 4208U cover and clear the keypad of any faulted zones.
4. Remove the 4208U's cover and verify (on the keypad) that only the zones you designated for this 4208U are indicating a check (or trouble) condition.

Table 3. Current Draw Calculations

Power Input Source (Input Voltage: 11 – 14VDC)	Current Draw (All zones shorted)	
	From Polling Loop	From External Power
Polling Loop Only	27.3 mA	
Polling Loop and External Power Input	0.6 mA	28 mA

SPECIFICATIONS

Physical:

Width: 6-7/16"(163mm)

Height: 4-1/4" (108mm)

Depth: 1-1/4" (32mm)

Electrical:

Polling loop input: 7.3 – 14 VDC

Current draw: 28.6mA max. External power and polling loop (see Table 3)

External Power Input (optional):

12VDC @ 28mA (from control panel's auxiliary power)

Sensor Loop Response:

Slow: 400 msec (all loops)

Fast: 10 msec (option for loops A and B)

Sensor Loop Current:

(@ Polling loop input = 11 VDC, no external power input):

0.52mA (normal)

1.3mA (shorted)

Sensor Loop Max. Resistance:

Up to 300 ohms of wire resistance + 10k EOLR.

For UL Listed Commercial Fire Usage:

Use N.O. contacts. Style B supervise these loops using Model # EOL 100 fire listed 10k EOLRs (purchased separately).

For UL Listed Commercial Burglary Usage:

Use N.O. or N.C. contacts. Supervise using EOLRs supplied.

ADEMCO Limited Warranty

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FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacture's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or master may find the following booklet prepared by the Federal Communications Commission helpful:

"Interference Handbook"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

SEE THE CONTROL PANEL'S INSTALLATION INSTRUCTIONS FOR COMPLETE INFORMATION REGARDING THE LIMITATIONS OF THE ENTIRE SECURITY SYSTEM.

ADEMCO GROUP

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N8215V4 5/01